

View the PowerTwist Drive installation video at: [www.fennerdrives.com/videos](http://www.fennerdrives.com/videos)

ENGLISH

### SIZING THE BELT

#### HAND-TIGHT LENGTH

**1**

Route the belt so it is "hand-tight" around the intended pulleys.

**2**

With the belt pulled snug, mark the tab that is straight down from the second overlapping tab (third tab for wedge profiles).

**3**

With one hand bend belt into an upside down "U". With the other hand twist the marked tab 90°.

**4**

Pull link end over tab. For wedge profiles, repeat with second tab.

**5**

Rotate end tab 90°. Pull belt end through links to separate.

#### MAKE TO FINISHED LENGTH

**6**

Count remaining links or measure belt length tip to tip.  
**Note:** For best results, count # of links, then check final tension with force deflection gauge after installation.

**7**

**IMPORTANT:** Using charts below, find the range corresponding to the number found in Step 6. Remove additional # of links to achieve proper installation tension.  
**Note:** For drives with multiple belts, make sure each belt has matching number of links.

OVER >>

### LINK REMOVAL GUIDELINES

3L/O/Z Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
18 - 35	12.6 - 23.8	320 - 604	1
36 - 55	23.9 - 36.7	605 - 932	2
56 - 79	36.8 - 52.0	933 - 1320	3
80 - 101	52.1 - 66.1	1321 - 1678	4
102 - 127	66.2 - 82.7	1679 - 2100	5
128 - 150	82.8 - 97.5	2101 - 2476	6

A/4L/13 Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
25 - 34	20.2 - 27.3	513 - 693	1
35 - 58	27.4 - 45.2	694 - 1148	2
59 - 82	45.3 - 63.1	1149 - 1602	3
83 - 105	63.2 - 80.3	1603 - 2039	4
106 - 129	80.4 - 98.2	2040 - 2494	5
130 - 153	98.3 - 116.1	2495 - 2946	6
154 - 176	116.2 - 133.3	2947 - 3385	7
177 - 200	133.4 - 151.2	3386 - 3840	8
201 - 224	151.3 - 169.1	3841 - 4295	9
225 - 247	169.2 - 186.3	4296 - 4732	10
248 - 271	186.4 - 204.2	4733 - 5186	11
272 - 295	204.3 - 222.1	5187 - 5641	12

B/5L/17 Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
29 - 34	29.6 - 34.9	751 - 886	1
35 - 58	35.0 - 58.0	887 - 1473	2
59 - 81	58.1 - 80.2	1474 - 2037	3
82 - 105	80.3 - 103.3	2038 - 2623	4
106 - 128	103.4 - 125.4	2624 - 3185	5
129 - 152	125.5 - 148.6	3186 - 3774	6
153 - 175	148.7 - 170.7	3775 - 4335	7
176 - 199	170.8 - 193.8	4336 - 4922	8
200 - 223	193.9 - 217.0	4923 - 5511	9
224 - 246	217.1 - 239.1	5512 - 6073	10
247 - 270	239.2 - 262.3	6074 - 6662	11
271 - 293	262.4 - 284.4	6663 - 7223	12
294 - 317	284.5 - 307.1	7224 - 7800	13

C/22 Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
48 - 67	63.4 - 88.3	1610 - 2242	3
68 - 86	88.4 - 113.2	2245 - 2874	4
87 - 105	113.3 - 138.1	2877 - 3506	5
106 - 125	138.2 - 164.3	3509 - 4172	6
126 - 144	164.4 - 189.1	4174 - 4804	7
145 - 164	189.2 - 215.3	4807 - 5470	8
165 - 183	215.4 - 240.2	5472 - 6102	9
184 - 202	240.3 - 265.1	6104 - 6734	10
203 - 222	265.2 - 291.3	6737 - 7400	11
223 - 241	291.4 - 316.2	7402 - 8032	12
242 - 260	316.3 - 341.1	8034 - 8664	13
261 - 280	341.2 - 367.3	8666 - 9329	14
281 - 299	367.4 - 392.2	9332 - 9962	15

3V/SPZ Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
<29	<18.0	<457	1
29 - 47	18.1 - 27.7	457 - 705	2
48 - 72	27.8 - 41.2	706 - 1048	3
73 - 96	41.3 - 54.2	1049 - 1378	4
97 - 120	54.3 - 66.9	1379 - 1700	5
121 - 144	67.0 - 80.1	1701 - 2037	6
145 - 168	80.2 - 92.8	2038 - 2359	7
169 - 192	92.9 - 106.1	2360 - 2696	8
193 - 217	106.2 - 119.4	2697 - 3032	9

SPA Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
<35	<30.2	<766	1
35 - 49	30.2 - 40.9	766 - 1040	2
50 - 69	41.0 - 56.2	1041 - 1429	3
70 - 86	56.3 - 69.3	1430 - 1761	4
87 - 104	69.4 - 83.1	1762 - 2111	5
105 - 122	83.2 - 96.9	2112 - 2462	6
123 - 139	97.0 - 109.9	2463 - 2793	7
140 - 157	110.0 - 123.7	2794 - 3144	8
158 - 175	123.8 - 137.5	3145 - 3494	9
176 - 193	137.6 - 151.3	3495 - 3845	10
194 - 211	151.4 - 165.2	3846 - 4196	11

5V/SPB Section			
Hand Tight # of Links	Belt Length*		# of Links to Remove
	inch	mm	
<47	<51.8	<1316	1
47 - 67	51.8 - 72.0	1316 - 1830	2
68 - 94	72.1 - 99.3	1831 - 2523	3
95 - 126	99.4 - 131.1	2524 - 3332	4
127 - 157	131.2 - 163.0	3333 - 4142	5
158 - 187	163.1 - 193.3	4143 - 4911	6
188 - 220	193.4 - 226.2	4912 - 5746	7

\* Belt length is measured open-ended from belt tip to tip

# INSTALLATION

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## MAKE BELT ENDLESS

8



Holding belt with tabs to the outside push end tab through two links (three links for wedge profiles). Twist tab 90° into place.

9



With your thumb twist second tab 90°. Push belt end down over tab with your opposite hand. For wedge profiles, repeat with remaining tab.

10



Ensure all tabs are fully turned and across the belt.

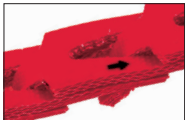
11



Rotate assembled belt so tabs are inside (facing down into the pulley groove).

## INSTALL ON DRIVE

12



Determine direction of drive rotation. Belt must travel in the same direction as the direction arrow. Tabs will trail.

13 A: DRIVE



Fit the belt in the closest groove of the smaller pulley. Roll belt onto larger pulley by turning the drive slowly. The belt should feel tight. DO NOT JOG THE MOTOR. Once installed check to make sure the all tabs are in position and the belt is not twisted. For multiple belt drives, work belt from groove to groove.

*If the installation with the recommended # of links removed is too difficult see 13B*

13 B: WEDGE



Use the belt take up system to install to the proper tension: position the motor approximately in the middle of its range of travel (mark position), hand fit the belt removing the recommend # of links. Move motor forward reducing the center distance enabling easy installation of the belt(s). Return motor back to original marked position.

14



Using a force deflection gauge, check Installation force and confirm it meets the requirements below.

## FORCE DEFLECTION GUIDELINES

Force Required to Deflect Belt 1/64" per 1" (16 mm per 1m) Center Distance				
Belt Section	Installation		During Operation	
	lbs.	Kgf	lbs.	Kgf
3L/O/Z	4 – 4.5	1.8 – 2	3	1.3
A/4L/13	4 – 5	1.8 – 2.3	3	1.3
B/5L/17	7 – 8	3.3 – 3.7	6	2.8
C/22	13 – 15	6 – 6.9	10	4.6
3V/SPZ	5 – 6	2.3 – 2.8	4	1.8
SPA	6 – 7	2.8 – 3.3	5	2.3
5V/SPB	13 – 15	6 – 6.9	8	3.7

Note: If deflection force drops below specified force for Operation, remove links or adjust take-up until belt is back to Installation force.

Note: If take-up system is not available, links can be added to reduce the tension. If links are added the belt may have to be re-tensioned by removing the extra links between ½ hour and 24 hours running at full load.

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